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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,566	12/14/2005	Reinhold Burr	016906-0385	6385

22428 7590 06/24/2010
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EXAMINER

MILLER, SAMANTHA A

ART UNIT	PAPER NUMBER
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3749

MAIL DATE	DELIVERY MODE
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06/24/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,566	Applicant(s) BURR ET AL.	
	Examiner SAMANTHA A. MILLER	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/10/2009;2/19/2009</u> | 6) <input checked="" type="checkbox"/> Other: <u>EP1332899</u> |

DETAILED ACTION

Reopening Prosecution After BPAI Decision

It has come to the attention of the examiner via Applicant's recent IDS that prior art exists which calls into question the patentability of the current application. Therefore, with the approval of the Director, prosecution is reopened on this application.

/KAREN M. YOUNG/

Director, Technology Center 3700

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, that "the entry region is axially symmetrical" (cls. 17, 29 and 34) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Viewing Fig. 4, the drawing which best shows the entry region, it appears that the vane defining the helical screw begins in the entry region (see the element which reference number 11 roughly points to in the figure).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

Art Unit: 3749

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites in line two a duct "for supplying air" and then in line 4 an air guiding device "for dividing air". However, it is not clear whether the applicant intends to refer specifically to the air recited in line 2 to or to any air generally. In examining the claims, it was interpreted to mean to divide any air generally.

Claims 16, 29 and 34 recite 'significant change in direction', but it is not clear what "significant" means.

Art Unit: 3749

Claims 17, 29, and 34 are indefinite because they recite 'axially symmetrical" but no axis is defined.

The text of claim 19 is unclear. The limitations claimed are not readily ascertainable.

Claim 28 recites in line two a duct "for supplying air" and then in line 5 an air guiding device "for dividing air". However, it is not clear whether the applicant intends to refer specifically to the air recited in line 2 to or to any air generally. In examining the claims, it was interpreted to mean to divide any air generally.

Claim 33 recites in line two a duct "for supplying air" and then in line 5 an air guiding device "for dividing air". However, it is not clear whether the applicant intends to refer specifically to the air recited in line 2 to or to any air generally. In examining the claims, it was interpreted to mean to divide any air generally. Further, regarding "the air" recited in lines 7 and 8, it is not clear to what air the air refers -- the air generally, the air through that particular subduct (which has not previously been recited).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuya (JP 60110522 A).

KAZUYA teaches:

15. An air duct for supplying air (Fig.3); a metering device (71, 72); and an air-guiding device (Fig.12) comprising a plurality of subducts (4, 5) for dividing air in the air-guiding device, and an outflow region (1) with an outer circumferential region (connected to 5) and a middle region (at 4) and, wherein one subduct (4) leads to the middle region and another subduct (5) leads to the outer circumferential region.

16. The air-guiding device comprises a divided entry region configured such that the air in the air-guiding device is divided into the plurality of subducts without any significant change in direction of the subducts in the divided entry region (Fig.3).

17. The division in the entry region is axially symmetrical (Fig.4).

18. The air-guiding device further comprises a partition (separating 4 from 5, Fig.3) which, at least in regions, runs along a longitudinal direction of the air duct.

19. The division of the air duct into a plurality of subducts is provided for at a distance of 1 to 10 times a mean diameter of the air duct in a corresponding region upstream of an exit of the air from the air-guiding device (Fig.12).

20. The air-guiding device further comprises an elbow, wherein the air is divided into a plurality of subducts in the region of the elbow (Fig.3, in the region of elbow 11).

21. The elbow has an angle from 80° to 100° (Fig.3).

22. The angle of the elbow is 90° (Fig.3).

23. The metering device (7) is arranged upstream of the air-guiding device.

24. The metering device (7) is configured to control air which can be fed to individual subducts of the plurality of subducts (Fig.8-9).

25. The metering device controls (7) distribution of incoming air between individual subducts and controls metering of the incoming air.

26 The metering device comprises an actuating device with a double flap controlled by a cam disc or a kinematic mechanism (81, 8, 71b, 72b; Fig.6).

27. The actuating device (8) is connected to an actuating member (81) via a shaft (Fig.6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasushi (JP10246500) in view of Kazuya et al (JP60110522).

As to independent claim 15, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c); and an outflow region (the downstream portion of 10 generally) with an middle region and an outer circumferential region (figs.

Art Unit: 3749

1a, 3a and b), wherein one subduct leads to the central region and another leads to the outer circumferential region.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to independent claim 28, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c); wherein one subduct (created by vanes 13) has a helical region. It is noted that the region is both helical and shape and therefore a helical region, and that the region creates a helical airflow and is therefore functionally considered a helical region.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to independent claim 33, Yasushi shows an air duct for supplying air 10; an air guiding device (the upstream portion of 10 generally) comprising a plurality of subducts for dividing air (subduct 11, and subducts created between vanes 13 through which flow B occurs —see figs. 1a, b, and c), wherein one of the subducts 11 is configured to impart a spot action to air and another (one of the subducts created between vanes 13) is configured to impart a swirl to the air at the exit.

Yasushi does not explicitly show a metering device.

Kazuya et al show a metering device comprising dampers 71,72. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Yasushi by providing the dampers of Kazuya et al in order to allow the main flow A through subduct 11 to be varied).

As to claim 16, Yasushi shows an entry region comprising the subducts 11 and subducts defined by vanes 13 such that the air guiding device is dividing into a plurality of subducts and the subducts do not have a significant change of direction (note that each subduct defined by vanes 13 maintains substantially the same direction even though each may have a different direction from other subducts).

As to claims 17, 29, and 34, Yasushi shows, in addition to that discussed regarding claim 16, that the entry region is axially symmetrical, as best understood by the examiner.

As to claim 18, the entry comprising at least one partition comprising the wall of subduct 11 running along a longitudinal direction.

Art Unit: 3749

As to claim 19, as best understood Yaushi shows all elements.

As to claims 20, 21, 30 and 35, Yasushi shows all elements except an elbow with an angle from 80 to 100 degrees wherein the subduct occur in the region of the elbow. Kazuya et al show this feature. It would have been obvious to one of ordinary skill in the art to modify the apparatus of Yasushi by providing the duct with an elbow in the region of the division in order to provide air to the subduct 11.

As to claim 22, Yasushi in view of Kazuya et al show an angle of 90 degrees.

As to claim 23, Yasushi in view of Kazuya et al shows the metering device upstream of the air guiding device.

As to claims 24, 25, 31, and 36 Yasushi in view of Kazuya et al show the metering device configured to control air to individual ducts comprising the subduct 11 and the distribution of air between ducts.

As to claims 26, 27, 32 and 37, Yasushi in view of Kazuya et al show that the actuating device has a double flap 71, 72 controlled by a cam or kinematic mechanism via a shaft (see eg., fig 6 of Kazuya et al).

Claims 15-18, 28, 29, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreas et al (DE10036776) in view of Meneghin et al (EP1332899).

As to claim 15, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts delivers air to a middle region of an outflow

Art Unit: 3749

area (e.g., fig. 3) and one of the subducts delivers air to a circumferential region (e.g. fig. 3)

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

As to claim 28, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts (the outer) has an elongated helical region (this region is functionally considered a helical region since a helical airflow flows through it. It is noted that no helical structural elements are claimed).

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

Alternatively, As to claim 28 Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air.

Art Unit: 3749

Andreas does not show an air metering device or that one of the subducts has a coiled or helical region.

Meneghin shows a metering device and a stationary helical vane 8 disposed about a cylinder 9. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device and helical guide vane as taught by Meneghin in order to provide control of the volume of airflow and to better control the pitch of the helical flow through the device.

As to claim 33, Andreas shows an air duct 7 for supplying air; and an air guiding device comprising a plurality of subducts (central subduct 8 and outer subduct 9 for dividing air wherein one of the subducts (the outer) is configured to impart a swirl to the air at the exit and the other subduct (inner) is configured to impart a spot action.

Andreas does not show an air metering device.

Meneghin shows a metering device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Andreas by providing a metering device as taught by Meneghin in order to provide control of the volume of airflow.

As to claim 16, 17, 29 and 34, the entry region comprising two coaxial cylinders providing substantially no direction change and providing axial symmetry.

As to claim 18, the air guiding device provides a partition running in a longitudinal direction.

Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrea in view of Meneghin et al as applied to claims 28 and 29 above, and further in view of Kazuya et al.

As to claims 30-32, Andrea in view of Meneghin show all elements except an elbow, and double flaps controlling individual subducts actuated by a cam or kinematic mechanism.

Kazuya et al show these elements as discussed above. It would have been obvious to one of ordinary skill in the art to further modify the apparatus in view of Kazuya et al by providing these elements in order to provide better control of the air by providing individual control, to provide for a means to actuate the damper, and to easily route air to the apparatus around corners.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samantha A. Miller whose telephone number is 571-272-9967. The examiner can normally be reached on Monday - Thursday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3749

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Samantha Miller
Examiner
Art Unit 3749
3/24/2010

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749